UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,402	10/31/2003	Man Soo Han	51876P399	3288

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EXAMINER
PATEL, CHANDRAHAS B

ART UNIT	PAPER NUMBER
2416	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2008*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-12* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 12/16/2008 has been entered.

Claim Rejections - 35 USC § 102

2.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

3.   Claims 1, 3-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Oki et al.

(USPN 7,006,514).

Regarding claim 1, Oki teaches an input buffered switch using pipelined simple

matching **[Fig. 1, 100]**, comprising: a plurality of input means **[Fig. 1, 110,]**, each having a

plurality of Virtual Output Queues (VOQs) for sending a request signal in every time slot when

each VOQ has at least one cell **[Fig. 1, 115]**, for outputting the cell according to a grant signal

transmitted to each VOQ **[Col. 5, lines 3-6, outputs when the request signal is 1]**; a scheduling

means for executing a contention process according to the request signals from each VOQ of the

plurality of input means **[Fig. 1, 120]**, sending contention results to the plurality of input means

and sending switch operation information **[Col. 5, lines 39-50, sends the signal to VOQ to

dispatch cells]**; and a switching means for outputting the cell received from the plurality of input

means responsive to the switch operation information received from the scheduling means **[Fig.**

1, 130], and wherein the scheduling means includes a plurality of sub-scheduling means for I)

executing a contention process for a plurality of time slots according to the request signals from

each VOQ of the plurality of the input means such that, in every time slot, one of the sub-

scheduler means begins executing the contention process and a second one of the sub-scheduler

means finishes executing the contention process **[Col. 5, lines 11-18, arbitration process is the**

contention process where at least one cell finishes contention process in each time slot,

Request flag in shown at Fig. 2, 224], and II) producing contention results based on only the

request signals received at initiation of the contention process **[Col. 7, lines 4-10, request**

signals are generated in parallel suggesting that only one request signal is necessary at the

start of arbitration process], wherein each VOQ having at least one awaiting cell sends, in

every time slot, the request signal for outputting a cell to the one sub-scheduling means **[Col. 8,**

line 43 – Col. 9, line 11, a request signal is sent through use of request counters in every

timeslot and the sub scheduler continues the matching process until VOQ is empty] that

begins the contention process in a current time slot **[Col. 8, lines 50-63, begins contention**

process in the current time slot when a cell arrives for arbitration and is to be output to

appropriate queue], and wherein the scheduling means further includes a multiplexing means

for multiplexing a contention result of each sub-scheduling means to the plurality of input means

[Col. 5, lines 62-67 – Col. 6, lines 1-3, multiplexes the contention result and uses it to

schedule output from VOQs].

       Regarding claims 3 and 9, Oki teaches sub-scheduling means gives priorities to each of

the input means in case of the contention process to the same output **[Col. 7, lines 13-16]**.

Regarding claims 4 and 10, Oki teaches each sends the request signal at every time slot

by sending the number of cells waiting in the VOQ to the scheduling means **[Col. 5, lines 39-**

50].

Regarding claim 5, Oki teaches a plurality of sub-scheduling means for executing the

contention process for a plurality of time slots according to the request signals from each VOQ

of the plurality of the input means such that one of the sub-scheduler means begins a contention

process and another sub-scheduler finishes executing a contention process **[Col. 5, lines 11-18,**

arbitration process is the contention process, Request flag in shown at Fig. 2, 224]; and a

multiplexing means for multiplexing a contention result of each sub-scheduling means to the

plurality of input means **[Col. 5, lines 62-67 – Col. 6, lines 1-3]**.

Regarding claims 6 and 11, Oki teaches sub-scheduling means gives a priority to the

VOQ that has the largest number of awaiting cells in the VOQ in case of the contention process

to the same output **[Col. 6, lines 46-48, by serving request counter scheduler gives priority to**

longest VOQ].

Regarding claims 7 and 12, Oki teaches each sub-scheduling means gives a priority to

each VOQ in the contention process to the same output **[Col. 7, lines 13-16]** and gives a priority

to a VOQ that has the largest number of awaiting cells in the VOQ when the VOQ having the

priority does not send the request signal **[Col. 6, lines 46-52, reference teaches these**

management responsibilities can be run periodically and does not teach that VOQ is

sending a signal having the priority].

Regarding claim 8, Oki teaches a contention method using pipelined simple matching in

an input buffered switch **[Abstract]**, comprising the steps of: a0) executing a contention process,

in every time slot at each of a plurality of sub-scheduling means, such that one of the sub-scheduling means starts the contention process in every time slot **[Col. 7, lines 4-10, contention process is started in each time slot]**; a) at each of a plurality of Virtual Output Queues (VOQs) that has at least one awaiting cell, sending, in every time slot, a request signal to the sub-scheduling means that begins the contention process in a current time slot **[Col. 8, line 43 – Col. 9, line 11, a request signal is sent through use of request counters in every timeslot and the sub scheduler continues the matching process until VOQ is empty and begins contention process in the current time slot when a cell arrives for arbitration and is to be output to appropriate queue]**; b) at the sub-scheduling means that begins the contention process, executing the contention process for a plurality of time slots according to the request signal from each VOQ that has at least one awaiting cell **[Col. 5, lines 11-18, Request flag is shown in Fig. 2, 224]**; c) when the sub-scheduling means finishes the contention process, sending a contention result to input means associated with the VOQ **[Col. 5, lines 62-67 – Col. 6, lines 1-3, multiplexes the contention result and uses it to schedule output from VOQs]**; and d) at a transfer-granted VOQ that is granted a transfer, transferring the cell to a switching means according to the contention result **[Fig. 1, 130]**, wherein the contention result is produced based on only the request signals received at initiation of the contention process in the sub-scheduling means **[Col. 7, lines 4-10, request signals are generated in parallel suggesting that only one request signal is necessary at the start of arbitration process]**.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chandrahas Patel whose telephone number is (571)270-1211.

The examiner can normally be reached on Monday through Thursday 7:30 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
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2416

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Examiner, Art Unit 2416